

AMENDMENTS TO ABSTRACT

A non-contact method of measuring the thickness of an insulator film ~~formed on one surface of~~ a semiconductor substrate, ~~in a non-contact manner with respect to the insulator film.~~ This method includes: (i) ~~a charging processing step of~~ charging the insulator film surface in a non-contact manner; (ii) ~~a charge amount measuring step including a step of~~ obtaining a first flat band voltage by conducting, prior to the charging processing step, a C-V measurement on the semiconductor substrate; ~~in a non-contact manner with respect to the insulator film; a step of~~ obtaining a second flat band voltage by conducting, after the charging processing step, a C-V measurement on the semiconductor substrate; ~~and in a non-contact manner with respect to the insulator film; and a step of~~ calculating, based on a difference between the first and second flat band voltages, the charge amount given to the insulator film surface by the charging processing step; (iii) ~~a surface potential measuring step of then measuring, after the charging processing step,~~ the insulator film surface potential ~~in a non-contact manner with respect to the insulator film;~~ and (iv) ~~a step of~~ calculating the insulator film thickness based on the charge amount measured at the charge amount measuring step and on the surface potential measured at the surface potential measuring step.